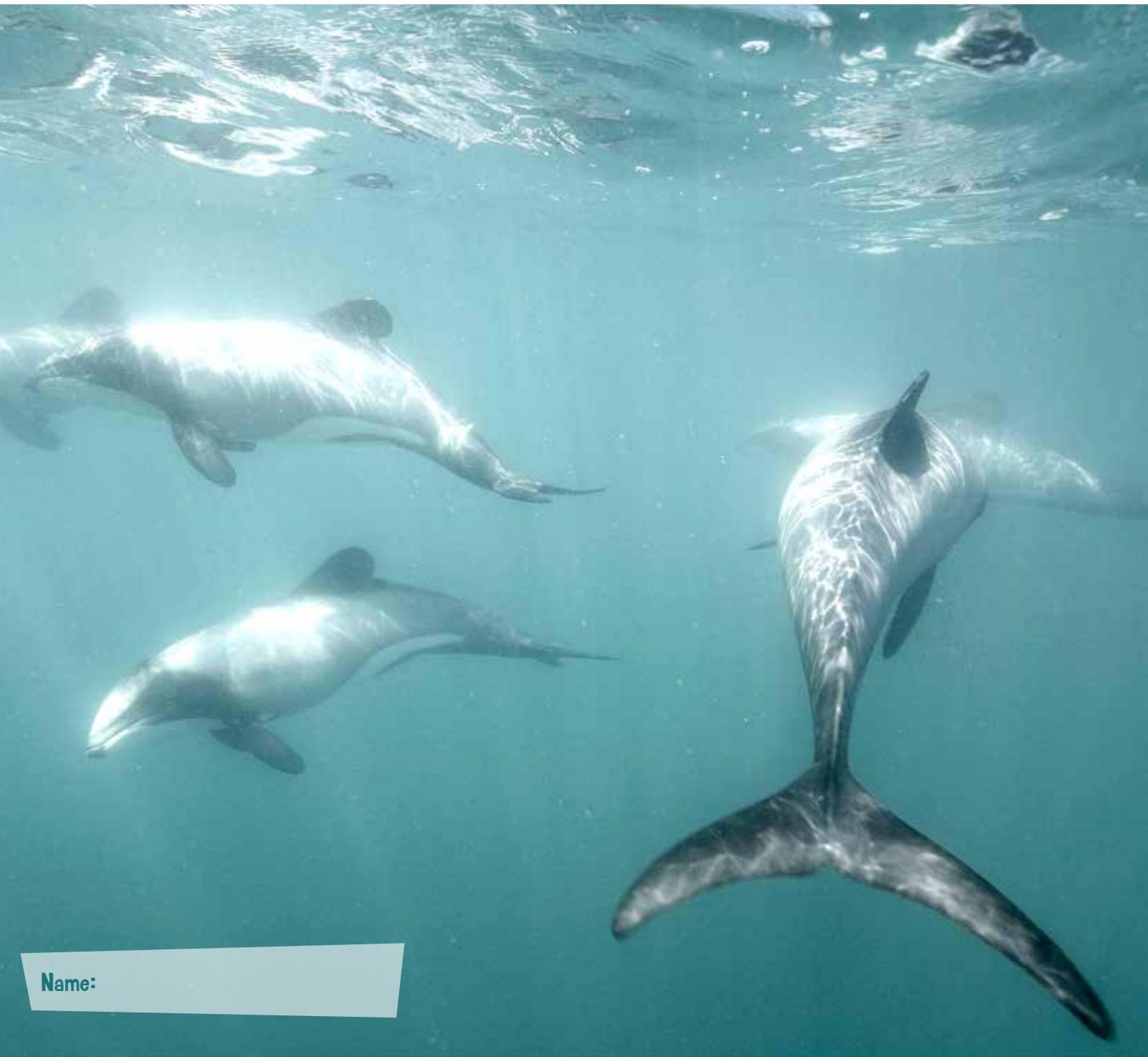


# The South Island Hector's Dolphin/Upokohue

A LEVEL 3 LEARNING PROGRAMME - STUDENT BOOK



Name: \_\_\_\_\_



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# Section A: Immerse yourself

## Specific learning intentions

To develop an understanding of the New Zealand unique marine environment and marine mammals.

To demonstrate a growing knowledge and understanding of the Hector's Dolphin/Upokohue with a specific focus on the South Island Hector's Dolphin/Upokohue and the threats they face.

## Success criteria

I can:

- Describe what a marine environment is and why New Zealand's marine environment is special.
- Define a marine mammal; describe some of New Zealand's endemic marine mammals. Analogue - how some are different and some are the same.
- Compare/contrast: The Hector's Dolphin/Upokohue - the Maui and South Island Hector's Dolphin/Upokohue.
- Describe/tell 'me' about the South Island Hector's Dolphin/Upokohue including what they look like, what they eat, special behaviours, threats and what is being done to protect them.

## TUNING IN - NEW ZEALAND'S MARINE ENVIRONMENT

### Activity 1 **My first Thoughts**

After watching the short video clip on marine environments ...

**What are you wondering?**

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**What does it make you think about?**

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**Why might this be worth learning about?**

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**What does this remind you of?**

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### Activity 2 **'Quick fire facts' that interested me the most**

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### Activity 3 Video of Tauranga's marine life

After watching the short video clip on Tauranga's marine mammals ...

What are you wondering?

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What does it make you think about?

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Why might this be worth learning about?

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What does this remind you of?

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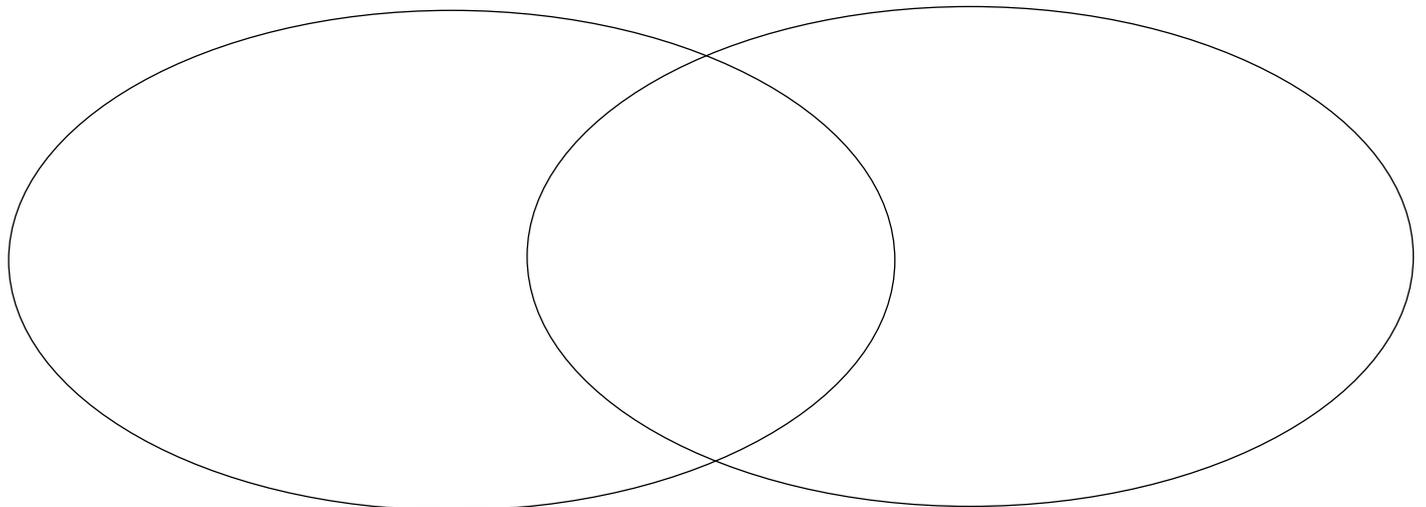
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### Activity 4 Marine Mammals - compare and contrast

Choose two marine mammals from the Department of Conservation/Te Papa Atawhai 'Marine Mammals of New Zealand' poster. Using the information from the poster, create a Venn diagram to compare and contrast them.

Here is an example of a complete Venn diagram comparing and contrasting whales and a fish:



I my own words, a marine mammal is :

.....

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## NINE FACTS ABOUT THE HECTOR'S DOLPHIN/UPOKOHUE

1. Among the world's smallest marine dolphins.
2. **Two sub-species:** the *South Island Hector's Dolphin/Upokohue* which is found around the South Island; and the *Māui's dolphin* which is found off the west coast of the North Island.
3. New Zealand's only **endemic** or native dolphin.
4. Mainly found in inshore waters – waters that are close to the coast.
5. Named after Sir James Hector who examined the first 'Hector's' dolphin.
6. Both the sub-species are threatened.
7. They are the only dolphins in the world with a rounded dorsal fin.
8. Distinctive black markings on their fins, tails, flippers and faces.
9. While common dolphins grow to about 2.6m in length, they typically only reach between a 1.2 - 1.5 metres.

DELVING DEEPER - YOUR MARINE ENVIRONMENT BANKS PENINSULA/TE PĀTAKA O RĀKAIHAUTŪ  
AND THE SOUTH ISLAND HECTOR'S DOLPHIN/UPOKOHUE

### Activity 6 Getting closer - A visit from Black Car Cruises and Te Hapu o Ngati Wheke (Rapaki)

What I found interesting

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What I found useful

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Questions I have for the trip

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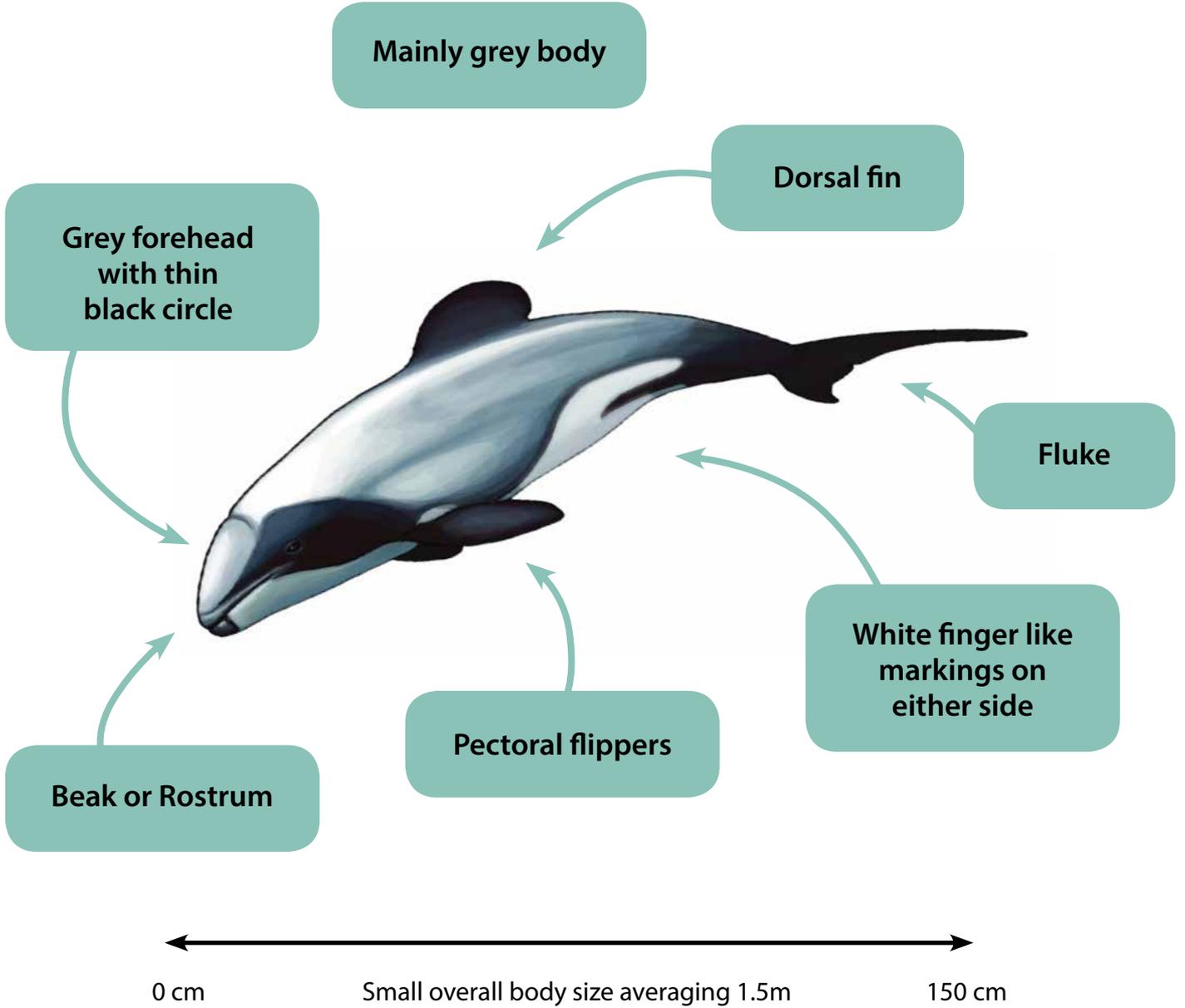
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Information Sheet for Activity 7

Why is the Hector's Dolphin/Upokohue like no other?



*Key words and helpful information*

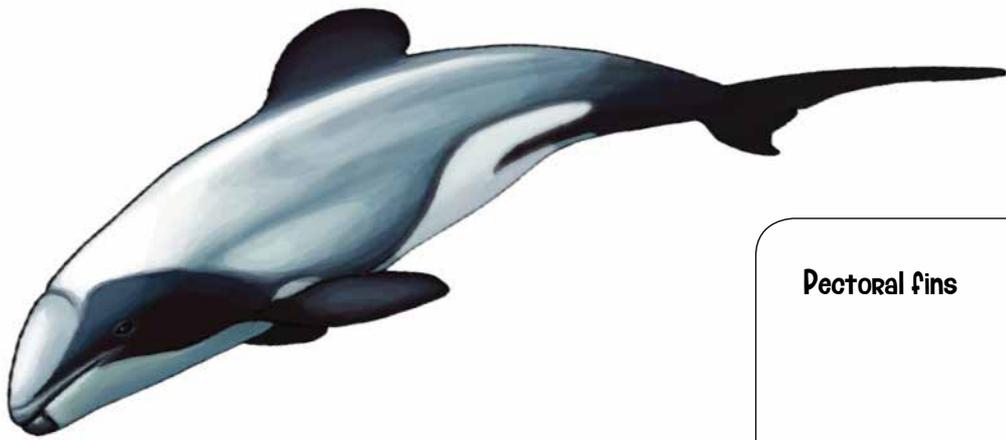
- Blubber** - insulates, buoyant
- Tail fin** - propels, pump up and down for a long time
- Steering** - left and right, stop, bones, just like hands
- Rudder** - upright in the water
- Rounded**
- 1.5 metres**

**Activity 7**

**Why the Hector's Dolphin/Upokohue is like no other**

**The Flukes**

**The body**



**Pectoral fins**

**Dorsal fin**

**How can we tell it is a Hector's Dolphin/Upokohue?**

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## Activity 8 **Getting along - You & the Hector's Dolphin/Upokohue**

Thinking about your home and family ...

**Including yourself, how many people live in your house?**

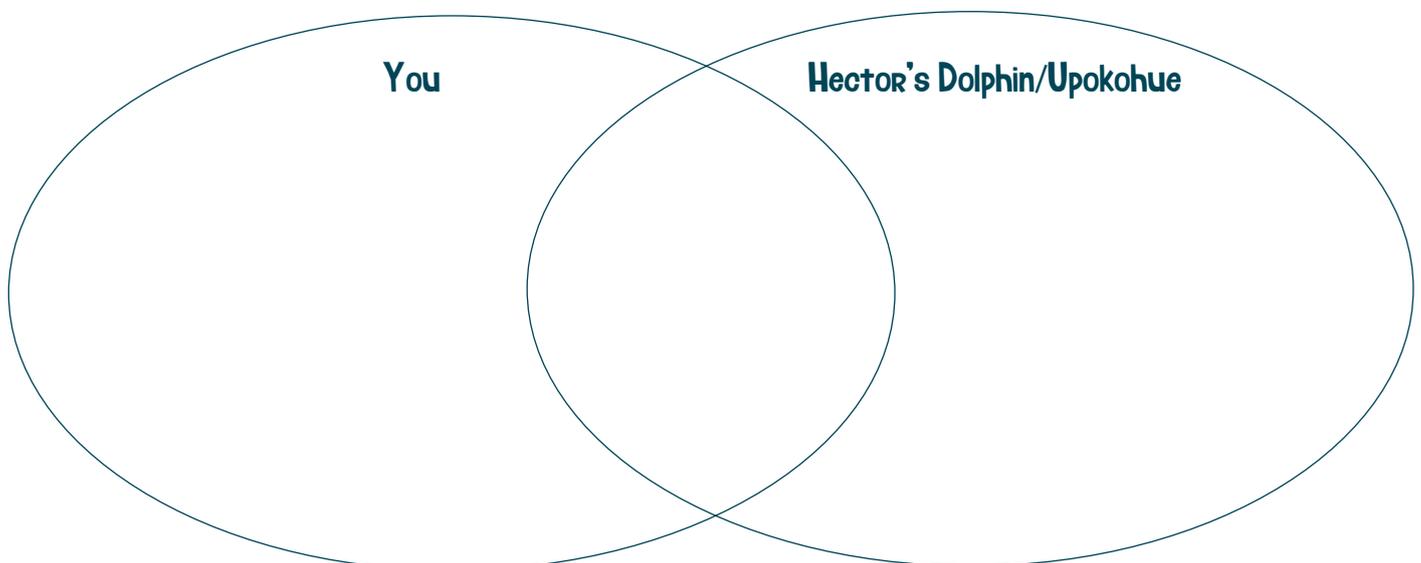
**Describe your house e.g. how many bedrooms, how long you have lived there**

**Relationships – who lives at your house and does everyone get along all of the time etc.?**

### Thinking about the Hector's Dolphins/Upokohue home...

- They live in social groups known as pods.
- The pods consist of between 2 and 12 other dolphins with several males or several females and their calves.
- The dolphins create very strong bonds within their smaller, 'family' pod.
- Like many groups living together, there are times where they become hostiles towards each other. They can bite or blow bubbles and splash their tails. Although this can be a sign of play it can also serve as a warning to other dolphins to keep their distance.
- The smaller 'family' pods sometimes join other larger groups of 20 - 30, and at times form pods as large as a 100 or so dolphins.

Using the Venn diagram below, compare and contrast your 'family' with the Hector's Dolphins/Upokohue 'pod'

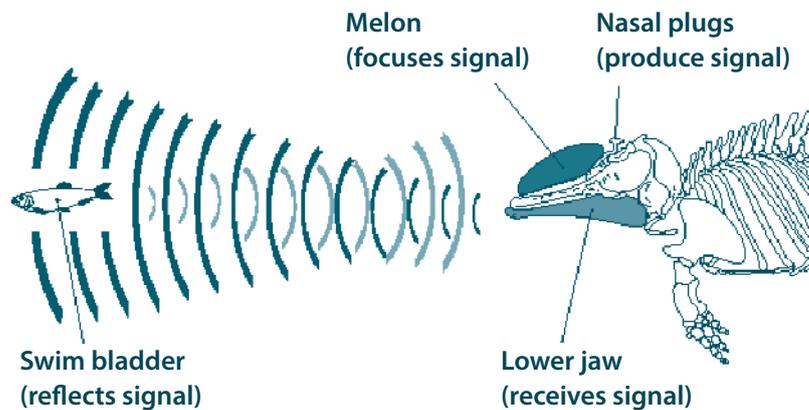
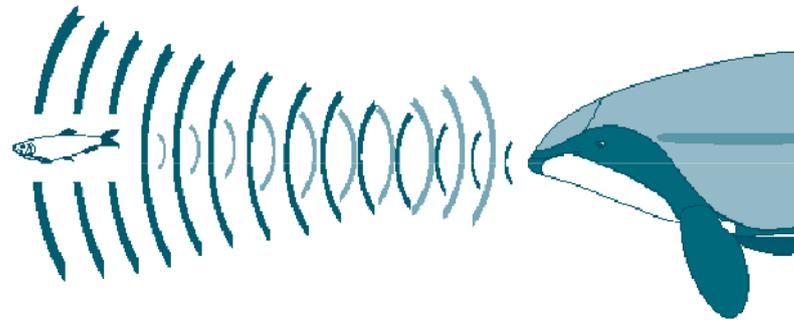


## Activity 9 Feeding time - it is all in the 'CLICK!'

Hector's Dolphin/Upokohue use **ECHOLOCATION** to find their food. It makes a 'clicking sound'. They send out high frequency 'clicks' that bounce off surrounding objects and fish, giving the dolphins a detailed picture of their surroundings.

When the sound strikes an object it bounces back and the dolphin can tell by listening what the object is - what kind of fish it is, how far away it is and how fast it is moving.

This echolocation sonar is not used all the time, which may be one of the reasons why the dolphins get caught in nets.



Source: S Dawson (WWF Maui's Dolphin - an inquiry to action)

Can you name 3 fish that the Hector's Dolphin/Upokohue likes to eat?

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What other reasons other than finding food does the Hector's Dolphin/Upokohue use echolocation for?

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# Section B: Investigation: Hector's Dolphin/Upokohue

## Specific learning intentions

To apply previous knowledge and understanding and apply it to the threats and protection of the Hector's Dolphin/Upokohue.

To theorise possible ways and outcomes to protect the Hector's Dolphin/Upokohue while considering the impact on groups and individuals affected by them.

## Success criteria

I can:

- Relate knowledge and understanding about the Hector's Dolphin/Upokohue and apply it to practical ways to protect them.
- Predict possible effects on individual and groups who may have different values than me and include that in my ideas.

### REFLECT, EVALUATE, ACT: A MARINE MAMMAL UNDER THREAT

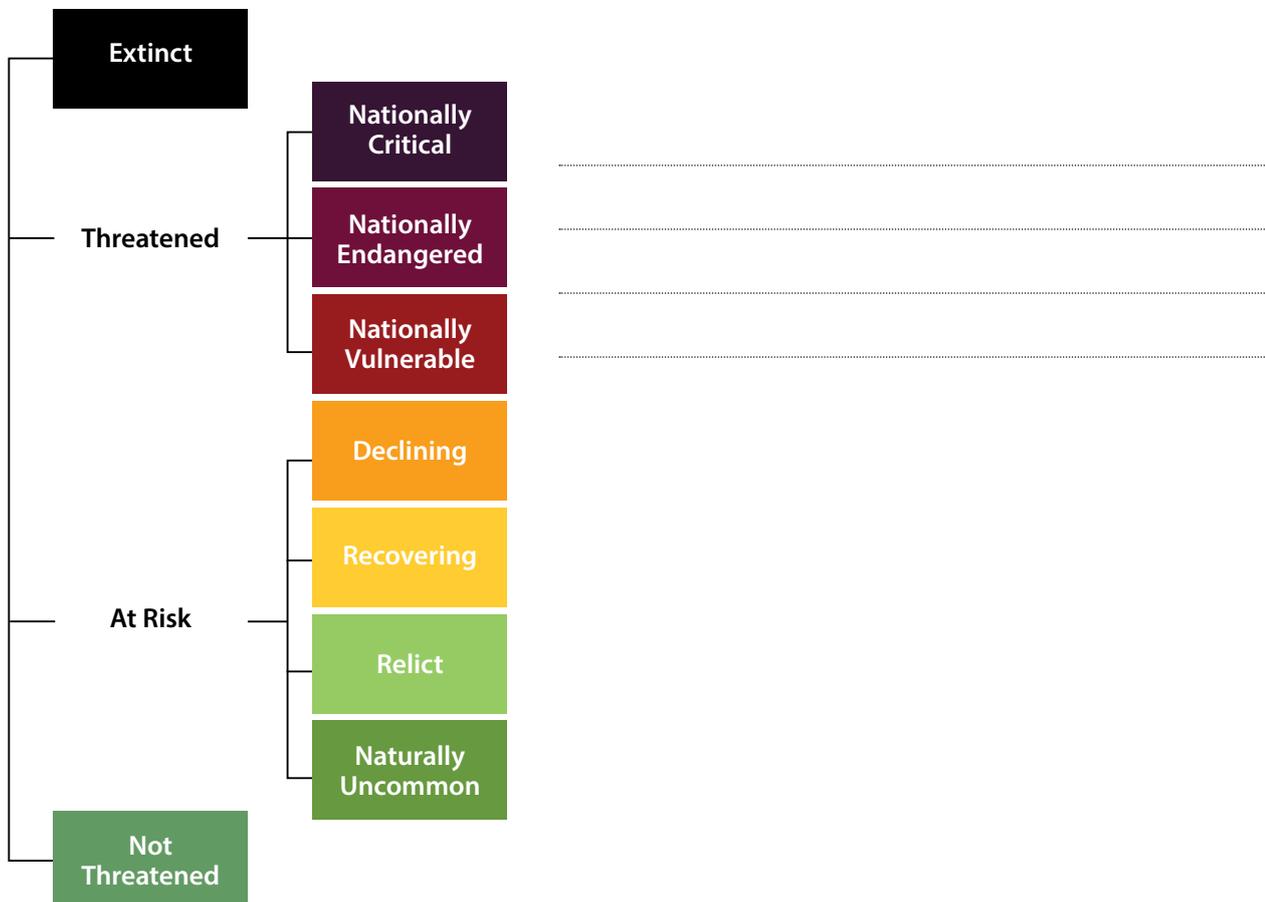
## Activity 11 It is all in the classification!

On the below **New Zealand Threat Classification System**, write the South Island **Hector's Dolphin/Upokohue** and **Maui's Dolphin** beside the right classification.

Can you name some New Zealand mammals and birds for the **Threatened** classifications below?  
Write them in the space provided.

Useful websites to find your threatened birds and mammals include:

- Department of Conservation: [www.doc.govt.nz/nature/conservation-status/threatened-birds](http://www.doc.govt.nz/nature/conservation-status/threatened-birds)
- Endangered Species Foundation: [www.endangeredspecies.org.nz/projects/10-most-endangered](http://www.endangeredspecies.org.nz/projects/10-most-endangered)
- The Redlist: [www.redlist.org](http://www.redlist.org)



New Zealand Threat Classification System (NZTCS) Source: DOC.

**THREATS**

**My key notes from watching 'Endangered dolphins in New Zealand':**

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**Our ideas to protect the Hector's Dolphin/Upokohue and potential challenges.**

**Ours ideas to protect**

**Challenges**

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**PROTECTION**

Referring to the Banks Peninsula/Te Pātaka o Rākaihautū marine sanctuary map (on the next page), how can we tell the marine sanctuary is working well? What could we use or do to improve it?

**What's working well?**

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**What could we do to improve it?**

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## Section C: Shout it from the shores!

### Specific learning intentions

Students will:

Create rich questions for inquiry.

Understand the endemic value and threatened status of the Hector's Dolphin/Upokohue; its behaviour, relationships and feeding patterns; the predominant threats it faces and protections put in place; and future challenges ahead

Explore values and build their understanding that people's views and values about the environment can be varied, and reflect on their own values.

Practice and develop group and cooperative skills.

Link their knowledge to the real life situation (transference).

### Success criteria

I can:

Establish my own inquiry questions.

Reflect on my understanding of the Hector's Dolphin/Upokohue and its endemic and threatened status

Apply my knowledge of Hector's Dolphin/Upokohue including its behaviour, relationships and feeding patterns; the predominant threats it faces and protections put in place; and future challenges ahead

Reflect on my knowledge and understanding and create ideas and actions to be used to help protect the Hector's Dolphin/Upokohue while considering other people's views and values.

Work with others to develop a plan of action.

## What can we do to fix it? Taking action for the South Island Hector's Dolphin/Upokohue

**Report any set nets or trawlers** operating within an area closed to these types of fishing by phoning the Ministry of Fisheries Hotline: 0800 4 POACHER (0800 476 224).

**If you see a Hector's Dolphin/Upokohue:** Report sightings - If you see a Hector's Dolphin/Upokohue being harassed, stranded or severely injured or dead contact 0800 DOC HOT (0800 362 468). Also, if you or a member of your family or friends catch a Hector's Dolphin/Upokohue in a fishing net, you also need to call 0800 DOC HOT (0800 362 468).

**Be boat smart** around dolphins. Use a 'no wake' boat speed within 300 metres of them. New Zealand law makes it illegal to harass any marine mammal. If you see a dolphin being harassed, or find a stranded or dead dolphin, report it straight away to DOC on 0800 DOC HOT - 0800 362 468 or call Project Jonah on 0800 4 WHALE - 0800 4 94253.

**Fishing gear and other rubbish** thrown overboard poses a serious risk to dolphins and other marine life. Make sure you take any rubbish back to shore and please retrieve any abandoned 'ghost' nets that you come across.

Make sure your rubbish stays out of storm water drains. Secure lids on bins and pick up any rubbish you see in the gutter or on the beach.



# New Zealand's Marine Environment

New Zealand's rich and complex marine environment is **subtropical** (warm) to subantarctic (cool). This means New Zealand has many different marine habitats, with over 15,000 known **species**.

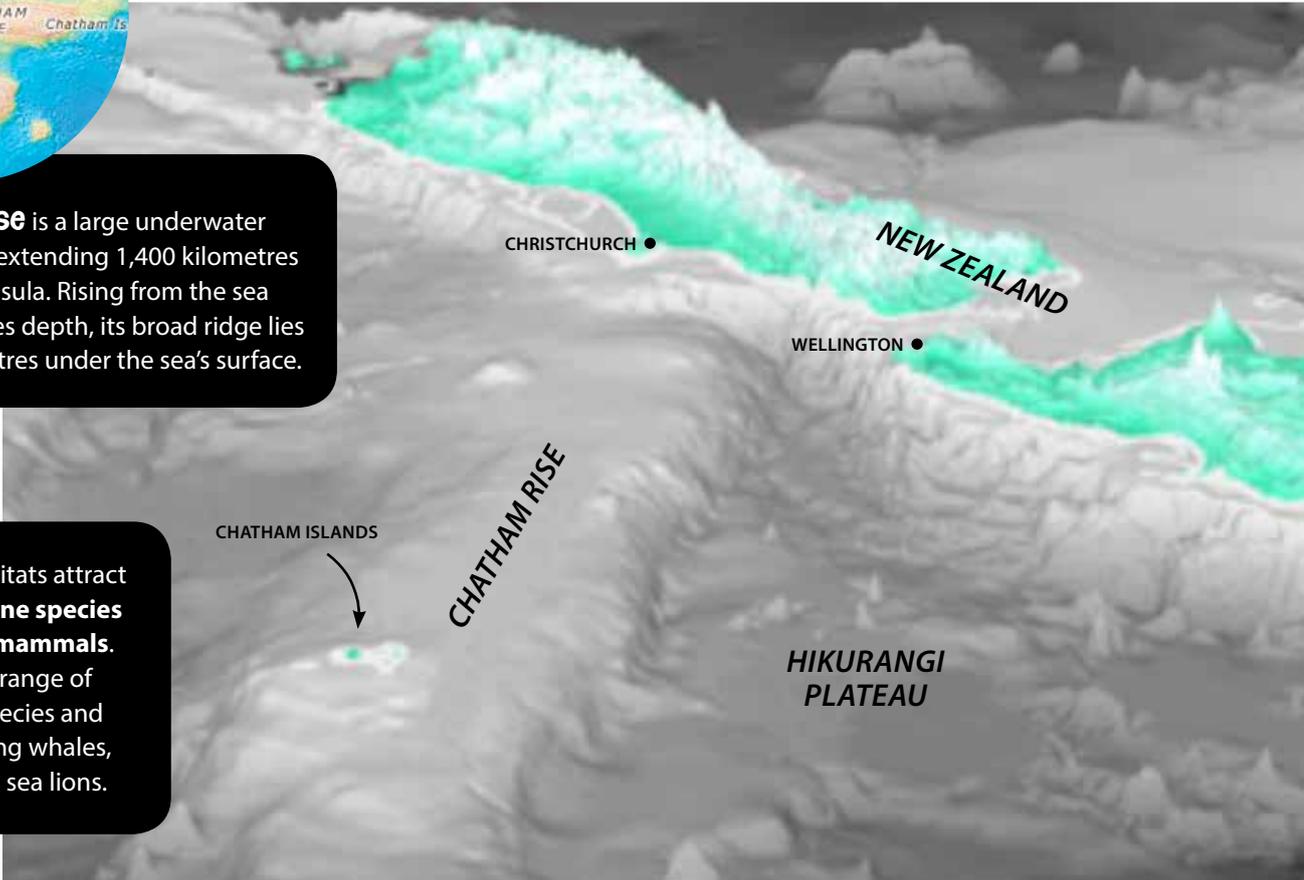


90 MILE BEACH

New Zealand has one of the **longest coastlines** and one of the largest marine areas in the world, compared with its land area.



The **Chatham Rise** is a large underwater **plateau** (flat land) extending 1,400 kilometres east of Banks Peninsula. Rising from the sea floor at 3,000 metres depth, its broad ridge lies some 350 - 400 metres under the sea's surface.



Diverse marine habitats attract **thousands of marine species including marine mammals**. New Zealand has a range of marine mammal species and subspecies, including whales, dolphins, seals, and sea lions.

## A selection of NZ's Marine Mammals



## Seascapes

A **seascape** is a 'view of the sea'. New Zealand has many different seascapes.



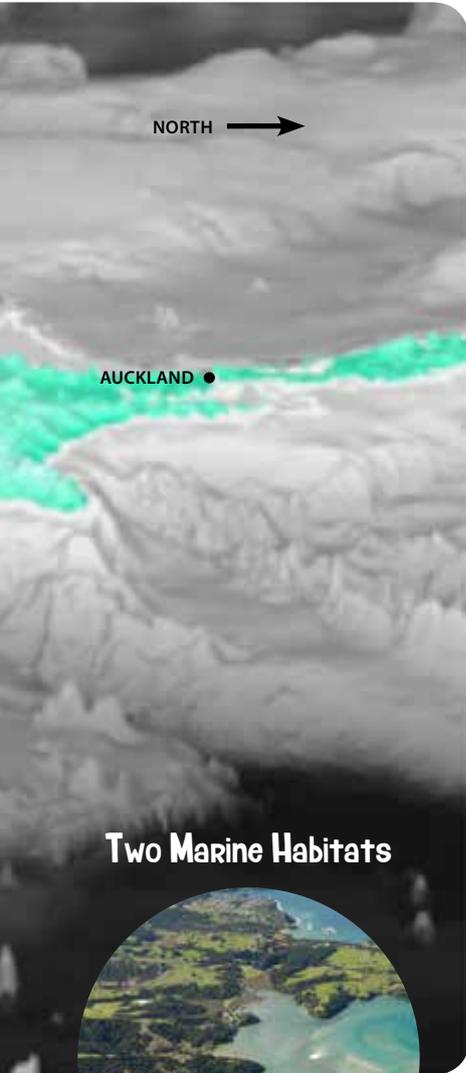
AKAROA HARBOUR - CANTERBURY



OKORITO - WEST COAST



ST KILDA - OTAGO



## Two Marine Habitats



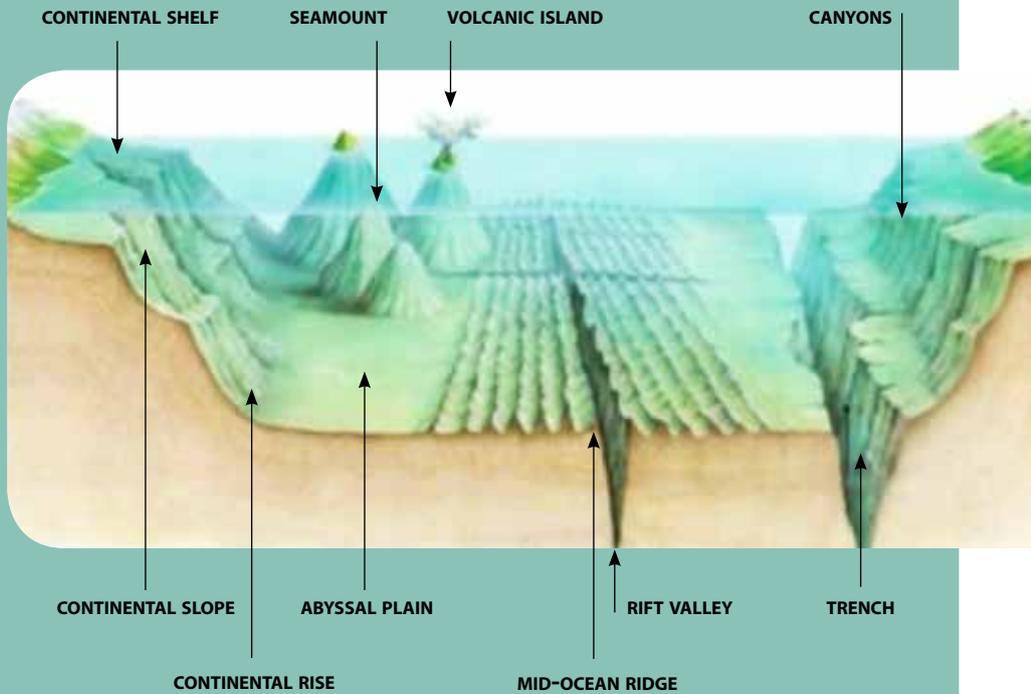
MANGROVES - WHANGATEAU HARBOUR



REEFS - KAIKOURA

New Zealand marine area has many diverse **marine habitats**, from saltmarsh and mangrove forests, to rocky coastal reefs, to deep sea trenches, canyons, undersea volcanoes, and seamounts.

## The Ocean Floor



Deep under the ocean, colossal mountains, and mountain ranges rise from the sea floor, their peaks far beneath the surface. The biggest are called '**seamounts**'. These underwater mountains are oases of life. Nutrient rich currents well up and swirl around their slopes feeding diverse and extraordinary **ecosystems**.

Ocean **trenches** are long, narrow hollows on the seafloor. They are the deepest parts of the ocean - and some of the deepest natural spots on Earth.

**Abyssal plains** are underwater areas of flat land on the deep sea floor.



For more information please visit our website: [www.blackcat.co.nz](http://www.blackcat.co.nz)